CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

STATEMENT OF INVESTMENT POLICY
FOR
DERIVATIVES - EXTERNAL MONEY MANAGERS

October 18, 2004

This Policy is effective immediately upon adoption and supersedes all previous policies pertaining to the use of investment derivatives by external money managers.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for the permitted circumstances, parameters, and requirements for the use of Investment Derivatives by External Money Managers ("the Program"). The design of this Policy ensures that investors, managers, consultants, or other participants selected by the California Public Employees' Retirement System ("the System") take prudent and careful action while managing the Program. Additionally, use of this Policy provides assurance that there is sufficient flexibility in controlling investment risks and returns associated with the use of derivative instruments.

II. STRATEGIC OBJECTIVE

Facilitating risk management while managing the cost of investing in publicly-traded stocks and bonds is the strategic objective of this Policy. The growth of derivative instruments worldwide facilitates the investment process. For the purposes of this document a "derivative instrument" is defined as an instrument that derives its value, usefulness, and marketability from an underlying instrument which represents direct ownership of an asset or a direct obligation of an issuer (i.e., a "spot" or cash market instrument).

The System retains external domestic and international money management firms ("Managers") for the express purpose of investing in publicly-traded stocks and bonds. The System is a long-term investor; therefore, Managers shall manage assets for the generation of long-term gains from investments, principally in cash market positions, stocks, and bonds. However, as a significant global institutional investor, the System is positioned for taking advantage of derivative instruments to ensure the overall investment performance objective is achieved as specified.

III. RESPONSIBILITIES AND DELEGATIONS

A. The **System's Investment Committee** ("Investment Committee") is responsible for approving and amending the Policy and delegating responsibility for administering the Policy to the System's Investment Staff (Delegation Nos. 89-13 and 95.50). In addition, the Investment Committee is responsible for approving Statements of Investment Policy for each asset class or program that incorporates the use of derivatives.

B. The **System's Investment Staff** ("the Staff") shall review written policies and procedures of the Managers concerning derivative use. The Staff shall monitor reports from the Managers and the System's custodian at least quarterly to ensure derivative use is in compliance with this Policy. The Staff shall monitor the use of derivatives by Managers to interpret if any violation has occurred.

The Staff and General Pension Consultant shall monitor the investment performance results of the Managers to ensure that any derivative use does not have a long-term deleterious effect on the Portfolio.

C. The **Managers** received investment discretion under their contracts with the System subject to their investment management guidelines. The System delegates to Managers the execution of derivatives transactions under this Policy, subject to Section VI.F. of this document. If Managers do not comply with this Policy, the System prohibits their use of derivatives. Nothing in this Policy supersedes the Managers' legal obligations to the System contained in their investment management contracts.

IV. BENCHMARK

Not applicable.

V. DERIVATIVE STRATEGIES

Four basic strategies can be achieved through the use of derivatives. Of these four strategies described below, only substitution and risk control are permitted; arbitrage and speculation are prohibited.

A. Permitted:

1. **Substitution:** When the characteristics of the derivative sufficiently parallel those of the cash market instrument, the

derivative may be substituted on a short-term basis for the cash market instrument, or on a longer-term basis to avoid withholding taxes. This strategy is particularly useful when investing cash flow or liquidating investments, as the derivative can be used to manage more precisely the market entry and exit points.

2. **Risk Control**: When characteristics of the derivative instrument sufficiently parallel those of the cash market instrument, an opposite position in the derivative can be taken from the cash market instrument to alter the exposure to or the risk (volatility) of the cash instrument. This strategy is useful to manage risk without having to sell the cash instrument. Sometimes referred to as 'hedging', the use of derivatives in this context means that there is at least a 95% correlation in price movement between the cash market or instrument and derivative instrument over a rolling three-year period. For currency overlay managers, the 95% correlation refers to the correlation between the proxy basket of currencies and the underlying portfolio.

B. Prohibited:

1. **Arbitrage:** When the characteristics of a derivative are more attractive than either the cash market instrument or another related derivative, the first derivative is purchased, or the cash market instrument is swapped to garner the short-term return potential from the derivative instrument alone. This strategy is particularly useful for capturing mis-pricing in the derivative instrument relative to either the cash market instrument or another derivative.

2. **Speculation:** When the characteristics of the derivative are the sole reason for its purchase or sale where an underlying naked cash position is taken in the portfolio. This strategy also implies the leveraging of the portfolio, which may create an obligation of value in excess of the value of that portfolio

VI. GENERAL REQUIREMENTS AND RESTRICTIONS

A. Each external manager shall prepare, maintain, and periodically review a written derivatives policy that describes the following information:

1. Specifies the philosophy and prescribed use of derivatives

for client accounts;

2. Establishes limits to derivatives exposure within a client account expressed in terms of percentage of notional amount of derivatives exposure as a percent of market value;

3. Establishes a standard of care concerning the following areas:

   a. Back office and systems capabilities,

   b. Internal audit and review of derivatives use,

   c. Separation of responsibilities,

   d. Senior management supervision,

   e. The required expertise of those permitted to engage in the use of derivatives, and

   f. The authority of those permitted to use derivatives.

4. Establishes and describes the following criteria:

   a. The accounting and valuation procedures in the use of derivatives,

   b. The counter-party exposure credit limit policy,

   c. The value-at-risk analysis regarding the impact to a client's portfolio caused by the use of derivatives,

   d. Reconciliation procedures with the client's master custodian bank,

   e. Reporting requirements to clients, and

   f. The frequency of the policy review and the names of individuals conducting the review.

5. Establishes and describes the monitoring procedures for the following issues:

   a. Policy implementation, and

b. Risk exposures

6. Describes the compensation of traders, portfolio managers, and other individuals involved in the use of derivatives to avoid inappropriate, fraudulent, or non-compliant behavior; and

7. Specifies the periodic review of the written derivatives policy.

B. Managers shall mark-to-market derivative positions daily.

C. Managers shall use a daily pricing source for valuing derivative positions.

D. Managers shall reconcile daily cash and margin positions with CalPERS' master custodian bank.

E. Any derivative transaction, which results in the leveraging of the portfolio, is strictly prohibited.

F. Only the Managers' investment guidelines can confer authorization to use derivatives, which is included as part of its contract with the System. If derivative use is authorized, then this Policy applies.

G. Any derivative transaction, or any action concerning derivatives not expressly permitted in this Policy, is prohibited unless singularly approved by the System's Chief Investment Officer or his/her designee. Managers shall request approval for any policy exception from the Staff, who will seek the appropriate determination.

H. Each Manager shall make available to the System's Chief Investment Officer or his/her designee, copies of any policy regarding derivatives it maintains which is applicable to the management of the System's account, including those policies required by this Policy.

I. Managers shall perform a cost/benefit analysis concerning a derivatives transaction before it is undertaken and shall make that analysis available to the System's External Equities and International Investments staff upon request. Forward currency transactions are exempt from this requirement.

J. While the use of options is permitted as expressed, there may be times when simultaneous, but opposing options positions may be taken by a manager. An example of this occurs when a call option is written so that the premium income received is then used to finance the purchase of a put option. When the manager explicitly demonstrates in writing that these simultaneous transactions result in a risk controlling or cost controlling impact to the System's portfolio, then they will be permitted. However, these transactions will be closely monitored to ensure that the Manager is not engaging in excessive derivative transactions, which are in conflict with the System's long-term investment objectives.

VII. TYPES OF RISKS

A. **Market Risk** - Managers shall have systems, procedures, and, if necessary, models to assess the market-related risks to the price behavior of the derivative instruments held in the portfolio, and the impact of market-related risk on the value of the portfolio managed for the System.

B. **Credit Risk -** Managers shall have available for inspection credit policies which are applicable to their derivative use. Credit risk analysis must assess the current replacement cost of the transaction of a counter-party default and estimate the replacement cost if the counter-party were to default at some future point during the derivatives exposure period.

C. **Liquidity Risk** - To minimize liquidity risk, the potential derivatives transaction shall be reviewed and supported by at least three market makers.

D. **Cash Flow Risk** - To minimize the cash flow requirements of the System, especially in the currency overlay program, Managers shall make use of master netting agreements and have systems in place to monitor when unrealized losses exceed unrealized gains in connection with derivatives transactions.

E. **Basis Risk** - To minimize basis risk, the price movement correlation of the derivative and the underlying cash market or instrument which represents the deliverable instrument must be at least 95% over a rolling three-year period. For currency overlay managers, the 95% correlation refers to the correlation between the proxy basket of currencies and the underlying portfolio.

F. **Legal Risk** - To minimize legal risk, Managers are prohibited from engaging in derivative transactions where such transactions are unenforceable under the laws of the governing jurisdiction. Managers are required to maintain sufficient documentation to enable enforceability of a claim arising from a derivatives transaction and may only engage in derivative transactions when there exists sufficient authority or capacity to do so. Where reasonable, Managers at their own expense shall engage appropriate legal counsel expert in the laws of the governing jurisdiction to protect the interests of the System in the use of derivatives.

G. **Settlement Risk** - To minimize settlement risk, master payment netting agreements shall be used where feasible and enforceable for payments in the same currency. Cross currency settlement risk shall be minimized by avoiding the use of spot and short-dated forward trades simultaneously.

H. **Operational Risk** - To minimize operational risk, Managers shall have sufficient internal controls to minimize derivative losses due to errors or omissions. These internal controls shall include the following:

1. Oversight of informed and involved senior management.

2. Documentation of policies and procedures, listing approved activities and establishing limits and exceptions, credit controls and management reports.

3. Independent risk management function, separate from the portfolio management function, or appropriate checks and balances to ensure proper risk management.

4. Independent internal and external audits to verify adherence to the firm's policies and procedures.

5. Back office support with sufficient technology and systems for handling confirmations, documentation, payment, margin levels and accounting and reporting.

6. A system of independent checks and balances throughout the derivative transaction process from initiation of trade to final settlement.

VIII. COUNTER-PARTY REQUIREMENTS

A. Each Manager shall prepare, maintain, and periodically review a counter-party credit policy for non-exchange-traded derivatives, meeting the following standards:

1. Outlines acceptable credit standards a counter-party must meet.

2. Outlines how a counter-party will be evaluated against those standards.

3. Specifies the individuals within the firm responsible for evaluating counter-party creditworthiness.

4. Specifies a list of approved counter-parties with credit exposure limits.

5. Outlines the frequency of review of counter-parties for the approved list.

6. Outlines procedures for enforcing the counter-party credit policy.

7. Provides for the independent audit of credit policy procedures to ensure compliance.

8. Requires the separation of trading (dealing) activity responsibilities from credit approval and review responsibilities and provides for a separate risk management function within the firm, or an appropriate sets of checks and balances to ensure proper risk management.

9. Outlines restrictions against the use of counter-parties requiring credit enhancement to establish acceptable creditworthiness.

10. Outlines appropriate internal reporting and control requirements for the management of counter-party risk exposure.

11. Provides for the contracting entity's chief executive oversight.

12. Specifies periodic review of the written counter-party credit policy.

B. Counter-party creditworthiness shall equal an "investment grade" of "A3" as defined by Moody's Investor Service or "A-" by Standard & Poor's. The use of counter-parties holding a split rating with one of the ratings below A3/A- is prohibited. Managers shall notify the System if a counter-party is downgraded below A3/A- while an instrument held in the portfolio is outstanding with that counter-party. The use of unrated counter-parties is prohibited.

C. Non-exchange traded derivatives or individual counter-party exposure, including the System's Custodian, are limited to 33% of the notional amount of the derivative exposure of the portfolio being managed for the System. An exception is allowed if total derivative exposure in the portfolio is less than $100 million. Where netting agreements approved by the System's Chief Investment Officer or his/her authorized designee are in place with the counter-party, only the net amount applies toward the $100 million limit.

D. Any entity acting as a counter-party shall be regulated in either the United States or the United Kingdom.

E. The Manager shall, where applicable and enforceable, use master agreements permitting the netting of counter-party exposures to minimize credit risk.

F. The System's Chief Investment Officer or his or her designee may request an adjustment of the counter-party exposure, as the System manages its overall counter-party exposure.

G. Managers are prohibited from "name washing" where credit guarantees extend to another party or parties, regardless of which party holds a higher rating.

IX. PERMITTED AND RESTRICTED INSTRUMENTS

The derivative instrument market is evolving and new instruments are created constantly. Rather than list each derivative, classes of derivatives will be described below, and **may only be used by Managers with guideline authority to do so.** A list of specifically approved derivative instruments shall be contained in the staff operations manual.

A. **Futures Contracts** - Stock index futures, bond futures and currency futures contracts which are Commodities and Futures Trading Commission (CFTC)-approved are permitted when the Manager has permission to invest in the underlying or deliverable cash market instrument.

B. **Options -** Stock index options, options on stocks and bonds, options on futures and currency options are permitted for use by Managers who have permission to invest in the underlying or deliverable cash market instrument or whose mandate is to overlay a designated portfolio of deliverable cash market instruments.

C. **Currency Forward Contracts** - Currency forward contracts are permitted for use by Managers who have permission to invest in the underlying or deliverable cash market instrument or whose mandate is to overlay a designated portfolio of deliverable cash market instruments. FX transactions may occur between foreign currencies (cross currencies) when made in anticipation of future sales or purchases of securities or when consistent with the Manager's currency management guidelines.

D. **Swaps -** Swaps which provide for the receipt of the rate of return of the permitted cash market instrument are allowed.

E. **Structured Notes** - Structured notes (such as, but not limited to, inverse floaters) and mortgages are not considered derivatives for the purposes of this Policy, and are prohibited, unless expressly permitted by the Manager's investment guidelines included in its contract with the System.

F. **Warrants -** Purchasing warrants separately is prohibited; however, warrants are permitted when attached to securities authorized for investment.

G. **Credit Default Swaps** -The purchase and sale of single name and basket/index credit default swaps of investment grade reference entities are permitted for use by Managers, if expressly permitted in the Manager's investment guidelines included in its contract with the System. In no case may credit default swaps be used to lever the portfolio.

X. LISTING REQUIREMENTS

Derivatives, which are futures contracts, shall be CFTC-approved and exchange-traded. Options may either be exchange-traded or traded over the counter. If traded over the counter, then manager shall strictly adhere to the counter-party guidelines.

XI. CRITERIA FOR NEW DERIVATIVES

Use of any new derivative shall only occur upon written authorization of the System's Chief Investment Officer or his/her authorized designee. New derivative instruments subject the investor to three types of risk:

A. Objective pricing risk

B. Legal risk

C. Liquidity risk

Because most derivative instruments are traded under unregulated circumstances, a “common law” practice shall prevail. Before use of a new derivative, at least three market makers shall review and support it. The three market makers shall have adequate capitalization, exemplary reputations in the marketplace, and creditworthiness equivalent to “investment grade” of “A3” as defined by Moody’s Investor Service or “A-“ by Standard & Poor’s. The benefits of three market makers include competitive pricing, a minimum number of market participants to create “commonly accepted practices and requirements” for a new derivative, and a minimum degree of liquidity to support institutional use. The derivative must be linked to a pre-existing permissible cash market or instrument, which can be used for delivery.

XII. REPORTING REQUIREMENTS

Managers shall prepare a monthly report for the System outlining the following information:

A. The derivatives and the counter-parties used and the market value, cost-value, gain or loss, notional exposure, and amount of exposure;

B. A description of the strategy and expected outcome of the derivative use; and

C. The quantified impact to the portfolio.

XIII. OPERATIONAL REQUIREMENTS

Managers shall comply at all times with the operational requirements of the System and its Custodian.

XIV. GLOSSARY OF TERMS

The Miscellaneous Policies Glossary of Terms is referenced in the System’s Master Glossary of Terms.

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM
STATEMENT OF INVESTMENT POLICY

FOR
DERIVATIVES – INVESTMENT OFFICE
May 15, 2000

This Policy is effective immediately upon adoption. No previous Investment Office Derivatives Policy exists.

I. PURPOSE

This document sets forth the investment policy ("the Policy") for the development and content of all derivative policy statements for each derivatives application within the California Public Employees' Retirement System ("the System") Investment Office.

II. STRATEGIC OBJECTIVE

Facilitating risk management and providing efficiency in the implementation of investment strategies using derivatives are the strategic objectives of this Policy.

III. RESPONSIBILITIES AND DELEGATIONS

A. The **System's Investment Committee** ("the Investment Committee") is responsible for approving and amending the Policy. The Investment Committee delegates the responsibility for administering the Policy to the Investment Staff through the Delegation of Authority (Delegation Nos. 89-13 and 95-50).

B. The **System's Investment Staff** ("the Staff") duties include, but are not limited, to the following:

1. Developing and recommending the Policy to the Investment Committee;

2. Maintaining a procedures manual which is subject to periodic review and updating that outlines staff operational procedures used in implementing this Policy;

3. Implementing and adhering to the Policy; and

4. Reporting immediately to the Investment Committee all violations of the Policy with explanations and recommendations.

C. The **General Pension Consultant** (the “General Pension Consultant”) is responsible for evaluating derivatives policy statements to ensure that the necessary issues are addressed.

IV. DEFINITION

A derivative is broadly defined as a financial instrument whose value, usefulness and marketability, is derived from or linked to the value of an underlying security, commodity, or index that represents either direct ownership of an asset or the direct obligation of an issuer, otherwise known as the cash market instrument. For the purpose of this Policy, a narrow definition of a derivative is used. It shall include only the following components:

A. Futures;

B. Forwards;

C. Swaps; and

D. All forms of options.

Derivatives, as defined in this Policy, shall not be construed to include a broad range of securities, such as Collateralized Mortgage Obligations (CMOS) and convertible bonds.

V. POLICY STATEMENTS

An implementing Derivatives Policy shall be written to cover each derivative application in the System’s Investment Office. At a minimum, each implementing Derivatives Policy statement shall address the following:

A. The purpose of the derivative strategy.

B. Justification for the use of derivatives.

C. Description of the risks inherent in the strategy and how they shall be managed. At a minimum, the descriptions shall include pricing risk, liquidity risk, and legal risk.

D. An appropriate risk analysis and monitoring capabilities for any derivative strategy implemented.

E. Each Implementing Derivatives Policy shall address the amount of leverage employed under the strategy, the prudent reasons for employing leverage, and the definition of leverage specific to the strategy, shall be consistent with any Investment Office-wide leverage policy.

F. Acceptable limits on overall exposure to be achieved through derivatives.

G. Criteria by which the use of counter parties is considered acceptable

H. Procedures for monitoring and managing the derivative exposure relative to the strategy including protocol for prompt reporting of violations of limits or other policy requirements.

I. Prohibited uses of derivatives and general restrictions on their use.

J. The requirement for external managers affirming that they will conform to the System's Derivatives Policy.

K. Provide for periodic staff review, at least annually, of the policy statement, specifically addressing the risks and assumptions it contains.

VI. OPERATIONAL REQUIREMENTS

To minimize operational risks, the System's Investment Office shall establish the following criteria to support the use of derivatives:

A. A documented procedure in the operations manual for the involvement of and oversight of derivatives activity by the Senior Investment Officer of the appropriate investment unit.

B. A risk management function that shall track the aggregation of risk across the various System portfolios, including derivative use.

   1. The risk management function shall be separated from the portfolio management function, ensuring proper risk management of derivatives use, counterparty exposure, and exposure to leverage.

   2. The risk management function and all derivatives use shall at all times comply with the requirements of any risk audit function which oversees the System's Investment Office.

C. Sufficient and experienced back office support with sufficient technology and systems for handling confirmations, payment, margin levels, and accounting and reporting of derivative use.

D. Each special derivative policy shall also have operational procedures that address:

   1. Accounting and valuation procedures of derivatives, including mark

to market procedures.

2. Reconciliation procedures for cash and margin positions with the master custodian bank.

3. Staff duties and responsibilities, including the separation of duties and responsibilities for those authorized to use derivatives.

4. Reports concerning violations of the operational procedures of each specific special policy along with the resolution or the recommended remedy or sanction.

VII. EVALUATING NEW DERIVATIVES

Each new derivative application shall be evaluated within a framework consistent with Section V of this policy.

VIII. BENCHMARK

Not applicable.

IX. GLOSSARY OF TERMS

The following Glossary of Terms contains definitions also referenced in the System's Master Glossary of Terms.

Cash Market – The physical market for a deliverable instrument or commodity.

Collateralized Mortgage Obligation (CMO) – A generic term for a security backed by real estate mortgages.

Collateral – Assets pledged to secure payment of a party's obligation under a transaction.

Convertible Bond – A bond that may, at the holder's option, be exchanged for other securities, often common stock.

Counter-Party – The entity which is in the opposing position to a transaction.

Forward Contract – A non-standardized contract for a deliverable commodity or instrument which conveys the obligation to make or take delivery of that commodity or instrument at a future point in time at a specified price.

Futures Contract – A standardized contract for a deliverable commodity or instrument which conveys the obligation to make or take delivery of that commodity or instrument at a future point in time at a specified price.

Leverage – A condition where the net economic exposure of an obligation exceeds the value of the underlying assets which support the obligation.

Margin – Collateral representing a portion of the notional amount of a transaction specified by the exchange clearing the transaction or the counter-party to the transaction.

Mark-to-Market – The valuation of a security or other instrument, transaction, or portfolio of same to current market prices.

Master Agreement – One agreement which covers the terms, conditions and settlement of a number of transactions.

Option – An instrument which conveys the right, but not the obligation to buy or sell a deliverable instrument at a specified price.

Swap – A contract where the parties agree to exchange the cash flows of the underlying assets in amounts and times specified by the contract.